

Measure #122: Adult Kidney Disease: Blood Pressure Management – National Quality Strategy
Domain: Effective Clinical Care

2017 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Intermediate Outcome

DESCRIPTION:
Percentage of patient visits for those patients aged 18 years and older with a diagnosis of chronic kidney disease (CKD) (stage 3, 4, or 5, not receiving Renal Replacement Therapy [RRT]) with a blood pressure < 140/90 mmHg OR ≥ 140/90 mmHg with a documented plan of care

INSTRUCTIONS:
This measure is to be reported at **each denominator eligible visit** indicated within the denominator, for patients with a diagnosis of chronic kidney disease (CKD) (stage 3, 4, or 5, not receiving RRT) seen during the **performance period**. It is anticipated that eligible clinicians providing care for patients with CKD will submit this measure.

This measure will be calculated with 3 performance rates:

1. Percentage of patient visits with blood pressure results < 140/90 mmHg
2. Percentage of patient visits with blood pressure results ≥ 140/90 mmHg and plan of care
3. Overall percentage of patient visits with blood pressure results < 140/90 mmHg and ≥ 140/90 mmHg with a documented plan of care

Eligible clinicians should continue to report the measure as specified, with no additional steps needed to account for multiple performance rates.

Measure Reporting:

The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

DENOMINATOR:

All patient visits for those patients aged 18 years and older with a diagnosis of CKD (stage 3, 4, or 5, not receiving RRT)

Definition:

RRT (Renal Replacement Therapy) – For the purposes of this measure, RRT includes hemodialysis, peritoneal dialysis, and kidney transplantation.

Denominator Criteria (Eligible Cases):

Patients aged ≥ 18 years on date of encounter

AND

Diagnosis for stage 3, 4, or 5 CKD (ICD-10-CM): N18.3, N18.4, N18.5

AND

Patient encounter during the **performance period** (CPT): 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99304, 99305, 99306, 99307, 99308, 99309, 99310, 99324, 99325, 99326, 99327, 99328, 99334, 99335, 99336, 99337, 99341, 99342, 99343, 99344, 99345, 99347, 99348, 99349, 99350

WITHOUT

Telehealth Modifier: GQ, GT

NUMERATOR:

Patient visits with blood pressure < 140/90 mmHg OR ≥ 140/90 mmHg with a documented plan of care

Numerator Instructions: If multiple blood pressure measurements are taken at a single visit, use the most recent measurement taken at that visit.

Definition:

Plan of Care – A documented plan of care should include one or more of the following: recheck blood pressure within 90 days; initiate or alter pharmacologic therapy for blood pressure control; initiate or alter non-pharmacologic therapy (lifestyle changes) for blood pressure control; documented review of patient's home blood pressure log which indicates that patient's blood pressure is or is not well controlled.

Numerator Options:

Performance Met:

Most recent blood pressure has a systolic measurement of < 140 mmHg and a diastolic measurement of < 90 mmHg (G8476)

OR

Performance Met:

Most recent blood pressure has a systolic measurement of ≥ 140 mmHg and/or a diastolic measurement of ≥ 90 mmHg (G8477)

AND

Elevated blood pressure plan of care documented (0513F)

OR

Performance Not Met:

Blood pressure measurement not performed or documented, reason not given (G8478)

OR

Performance Not Met:

No documentation of elevated blood pressure plan of care, reason not otherwise specified (0513F *with* 8P)

AND

Most recent blood pressure has a systolic measurement of ≥140 mmHg and/or a diastolic measurement of ≥ 90 mmHg (G8477)

RATIONALE:

Accurate measurement in CKD is especially important, because hypertension is more common in CKD, and because JNC 8 identifies CKD as a "compelling indication" for more aggressive antihypertensive therapy because of the higher risk of CVD in CKD than in the general population.

CLINICAL RECOMMENDATION STATEMENTS:

Only selected portions of the clinical guidelines are quoted here; for more details, please refer to the full guideline. Blood pressure should be measured at each health encounter (Grade A). (KDOQI, 2004)

If a patient has GFR ≤ 30 ml/min/1.73m², then his/her blood pressure should be checked with every clinic visit (Grade A). (RPA, 2002)

In the population aged ≥18 years with chronic kidney disease (CKD), initiate pharmacologic treatment to lower BP at SBP ≥140 mm Hg or DBP ≥90 mm Hg and treat to goal SBP <140 mm Hg and goal DBP <90 mm Hg. (Expert Opinion – Grade E). (JNC8, 2014)

Patients with CKD should be considered in the “highest-risk” group for CVD for implementing recommendations for pharmacological therapy, irrespective of cause of CKD (Grade A). (KDOQI, 2004)

All antihypertensive agents can be used to lower blood pressure in CKD. Multidrug regimens will be necessary in most patients with CKD to achieve therapeutic goals. Patients with specific causes of kidney disease and CVD will benefit from specific classes of agents. (KDOQI, 2004)

All classes of antihypertensive agents are effective in lowering blood pressure in CKD. Antihypertensive agents should be prescribed as follows, when possible: Preferred agents for CKD should be used first (Grade A); Diuretics should be included in the antihypertensive regimen in most patients (Grade A); Choose additional agents based on cardiovascular disease-specific indications to achieve therapeutic and preventive targets and to avoid side-effects and interactions (Grade B). (KDOQI, 2004)

Elevated blood pressure must be confirmed on repeated visits before characterizing an individual as having hypertension. Blood pressure can be determined by resting blood pressure measurement in the health-care provider’s office (casual blood pressure [CBP]), self-measured blood pressure (SMBP), or ambulatory blood pressure monitoring (ABPM). Blood pressure should be measured according to the recommendations for indirect measurement of arterial blood pressure of the American Heart Association and Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) (Grade A); Patients should be taught to measure and record their blood pressure, whenever possible (Grade C). (KDOQI, 2004)

High blood pressure is both a cause and a complication of chronic kidney disease. As a complication, high blood pressure may develop early during the course of chronic kidney disease and is associated with adverse outcomes—in particular, faster loss of kidney function and development of cardiovascular disease.

- Blood pressure should be closely monitored in all patients with chronic kidney disease.
- Treatment of high blood pressure in chronic kidney disease should include specification of target blood pressure levels, nonpharmacologic therapy, and specific antihypertensive agents for the prevention of progression of kidney disease (Guideline 13) and development of cardiovascular disease (Guideline 15). (KDOQI, 2002)
- Interventions to slow the progression of kidney disease should be considered in all patients with chronic kidney disease.
- Interventions that have been proven to be effective include:
 - 1) Strict glucose control in diabetes;
 - 2) Strict blood pressure control;
 - 3) Angiotensin-converting enzyme inhibition or angiotensin-2 receptor blockade. (KDOQI, 2002)

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2017 Registry Individual Measure Flow #122: Adult Kidney Disease: Blood Pressure Management

*Multiple Performance Rate****



* See the posted Measure Specification for specific coding and instructions to report this measure.

** If multiple blood pressure measurements are taken at a single visit, use the most recent measurement taken at that visit.

***This measure will be calculated with 3 performance rates: 1) Percentage of patient visits with blood pressure results < 140/90 mmHg; 2) Percentage of patient visits with blood pressure results ≥ 140/90 mmHg and plan of care; 3) Overall percentage of patient visits with blood pressure results < 140/90 mmHg and ≥ 140/90 mmHg with a documented plan of care

NOTE: Reporting Frequency: Visit

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The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.

2017 Registry Individual Measure Flow
#122: Adult Kidney Disease: Blood Pressure Management

Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in reporting this Individual Measure.

1. Start with Denominator
2. Check Patient Age:
 - a. If the Age is greater than or equal to 18 years of age at Date of Service and equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.
 - b. If the Age is greater than or equal to 18 years of age at Date of Service and equals Yes during the measurement period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of CKD (stage 3, 4, 5) as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of CKD (stage 3, 4, 5) as Listed in the Denominator equals Yes, proceed to check Encounter Performed.
4. Check Encounter Performed:
 - a. If Encounter as listed in the denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Encounter as listed in the denominator equals Yes, proceed to check Telehealth Modifier.
5. Check Telehealth Modifier:
 - a. If Telehealth Modifier equals Yes, do not include in Eligible Patient Population. Stop Processing.
 - b. If Telehealth Modifier equals No, include in the Eligible population.
6. Denominator Population:
 - a. Denominator population is all Eligible Patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 8 visits in the sample calculation.
7. Start Numerator
8. Check Most Recent Systolic Blood Pressure <140 mmHg and Diastolic Blood Pressure <90mmHg:
 - a. If Most Recent Systolic Blood Pressure <140 mmHg and Diastolic Blood Pressure <90mmHg equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a1 equals 2 visits in Sample Calculation.

- c. If Most Recent Systolic Blood Pressure <140 mmHg and Diastolic Blood Pressure <90mmHg equals No, proceed to Most Recent Blood Pressure has a Systolic Measurement of ≥ 140 mmHg and/or a Diastolic Measurement of ≥ 90 mmHg AND Elevated Blood pressure Plan of Care Documented.
9. Check Most Recent Blood Pressure has a Systolic Measurement of ≥ 140 mmHg and/or a Diastolic Measurement of ≥ 90 mmHg AND Elevated Blood pressure Plan of Care Documented:
 - a. If Most Recent Blood Pressure has a Systolic Measurement of ≥ 140 mmHg and/or a Diastolic Measurement of ≥ 90 mmHg AND Elevated Blood pressure Plan of Care Documented equals Yes, include in Data Completeness Met and Performance Met.
 - b. Data Completeness Met and Performance Met letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a2 equals 1 visit in the Sample Calculation.
 - c. If Most Recent Blood Pressure has a Systolic Measurement of ≥ 140 mmHg and/or a Diastolic Measurement of ≥ 90 mmHg AND Elevated Blood pressure Plan of Care Documented equals No, proceed to Blood Pressure Measurement Not Performed or Documented, Reason Not Given.
10. Check Blood Pressure Measurement Not Performed or Documented, Reason Not Given:
 - a. If Blood Pressure Measurement Not Performed or Documented, Reason Not Given equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c1 equals 2 visits in the Sample Calculation.
 - c. If Blood Pressure Measurement Not Performed or Documented, Reason Not Given equals No, proceed to No Documentation of Elevated Blood Pressure Plan of Care, Reason Not Specified AND Most Recent Blood Pressure has a Systolic Measurement ≥ 140 mmHg and/or Diastolic Measurement ≥ 90 mmHg.
11. Check No Documentation of Elevated Blood Pressure Plan of Care, Reason Not Specified AND Most Recent Blood Pressure has a Systolic Measurement ≥ 140 mmHg and/or Diastolic Measurement ≥ 90 mmHg:
 - a. If No Documentation of Elevated Blood Pressure Plan of Care, Reason Not Specified AND Most Recent Blood Pressure has a Systolic Measurement ≥ 140 mmHg and/or Diastolic Measurement ≥ 90 mmHg equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c2 equals 2 visits in the Sample Calculation.
 - c. If No Documentation of Elevated Blood Pressure Plan of Care, Reason Not Specified AND Systolic Blood Pressure ≥ 140 mmHg and/or Diastolic Blood Pressure ≥ 90 mmHg equals No, proceed to Data Completeness Not Met.
12. Check Data Completeness Not Met:
 - a. If Data Completeness Not Met equals No, Quality Data Code or equivalent not reported. 1 visit has been subtracted from the data completeness numerator in the sample calculation.

2017 Registry Individual Measure Flow: Sample Calculations #122: Adult Kidney Disease: Blood Pressure Management

SAMPLE CALCULATION: Data Completeness and Performance Rate One: Blood Pressure Results < 140/90 mmHG***

Data Completeness 1=

$$\frac{\text{Performance Met (a}^1\text{=2 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{6 \text{ visits}}{8 \text{ visits}} = 75.00\%$$

Performance Rate 1=

$$\frac{\text{Performance Met (a}^1\text{= 2 visits)}}{\text{Data Completeness Numerator (6 visits)}} = \frac{2 \text{ visits}}{6 \text{ visits}} = 33.33\%$$

SAMPLE CALCULATION: Data Completeness and Performance Rate Two: Blood Pressure Results ≥ 140/90 mmHG with Plan of Care***

Data Completeness 2=

$$\frac{\text{Performance Met (a}^2\text{=1 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{5 \text{ visits}}{8 \text{ visits}} = 62.50\%$$

Performance Rate 2=

$$\frac{\text{Performance Met (a}^2\text{=1 visit)}}{\text{Data Completeness Numerator (5 visits)}} = \frac{1 \text{ visits}}{5 \text{ visits}} = 20.00\%$$

SAMPLE CALCULATION: Overall Data Completeness and Performance Rate***

Data Completeness 3=

$$\frac{\text{Performance Met (a}^1\text{+a}^2\text{=3 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{7 \text{ visits}}{8 \text{ visits}} = 87.50\%$$

Performance Rate 3=

$$\frac{\text{Performance Met (a}^1\text{+a}^2\text{=3 visits)}}{\text{Data Completeness Numerator (7 visits)}} = \frac{3 \text{ visits}}{7 \text{ visits}} = 42.86\%$$

* See the posted Measure Specification for specific coding and instructions to report this measure.

** If multiple blood pressure measurements are taken at a single visit, use the most recent measurement taken at that visit.

***This measure will be calculated with 3 performance rates: 1) Percentage of patient visits with blood pressure results < 140/90 mmHg; 2) Percentage of patient visits with blood pressure results ≥ 140/90 mmHg and plan of care; 3) Overall percentage of patient visits with blood pressure results < 140/90 mmHg and ≥ 140/90 mmHg with a documented plan of care. It is anticipated for registry reporting that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

NOTE: Reporting Frequency: Visit

SAMPLE CALCULATION: Data Completeness and Performance Rate One: Blood Pressure Results < 140/90 mmHG***

Data Completeness 1=

$$\frac{\text{Performance Met (a}^1\text{=2 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{6 \text{ visits}}{8 \text{ visits}} = 75.00\%$$

Performance Rate 1=

$$\frac{\text{Performance Met (a}^1\text{=2 visits)}}{\text{Data Completeness Numerator (6 visits)}} = \frac{2 \text{ visits}}{6 \text{ visits}} = 33.33\%$$

SAMPLE CALCULATION: Data Completeness and Performance Rate Two: Blood Pressure Results ≥ 140/90 mmHG with Plan of Care***

Data Completeness 2=

$$\frac{\text{Performance Met (a}^2\text{=1 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{5 \text{ visits}}{8 \text{ visits}} = 62.50\%$$

Performance Rate 2=

$$\frac{\text{Performance Met (a}^2\text{=1 visit)}}{\text{Data Completeness Numerator (5 visits)}} = \frac{1 \text{ visits}}{5 \text{ visits}} = 20.00\%$$

SAMPLE CALCULATION: Overall Data Completeness and Performance Rate***

Data Completeness 3=

$$\frac{\text{Performance Met (a}^1\text{+a}^2\text{=3 visits) + Performance Not Met (c}^1\text{+c}^2\text{=4 visits)}}{\text{Eligible Population / Denominator (d=8 visits)}} = \frac{7 \text{ visits}}{8 \text{ visits}} = 87.50\%$$

Performance Rate 3=

$$\frac{\text{Performance Met (a}^1\text{+a}^2\text{=3 visits)}}{\text{Data Completeness Numerator (7 visits)}} = \frac{3 \text{ visits}}{7 \text{ visits}} = 42.86\%$$